**SUPPLEMENTARY MATERIAL**

**TO**

# Concentration of a widespread breeding population in a few critically important nonbreeding areas: Migratory connectivity in the Prothonotary Warbler

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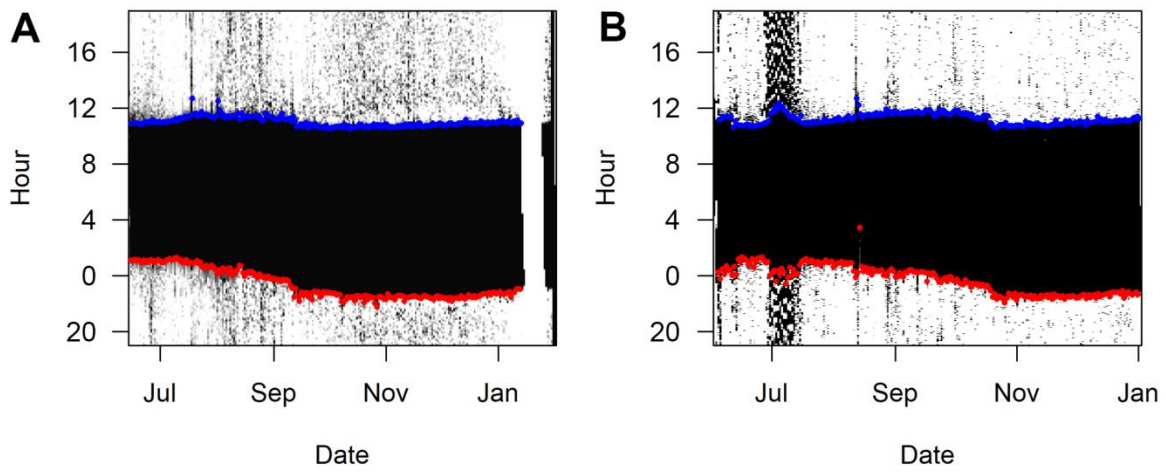



**FIGURE S1.** Example of two individual light images (light periods = white, dark periods = black), (**A**) one with no light pattern associated with nest box use and (**B**) one with shading events characteristic of nest box using during incubation. Twilight events (sunrise = blue dots and sunset = red dots) are also shown in Greenwich Mean Time (GMT). We excluded twilight events during obvious incubation periods from calculations to determine error distributions around measured vs. observed twilight events and for zenith angle calculations.

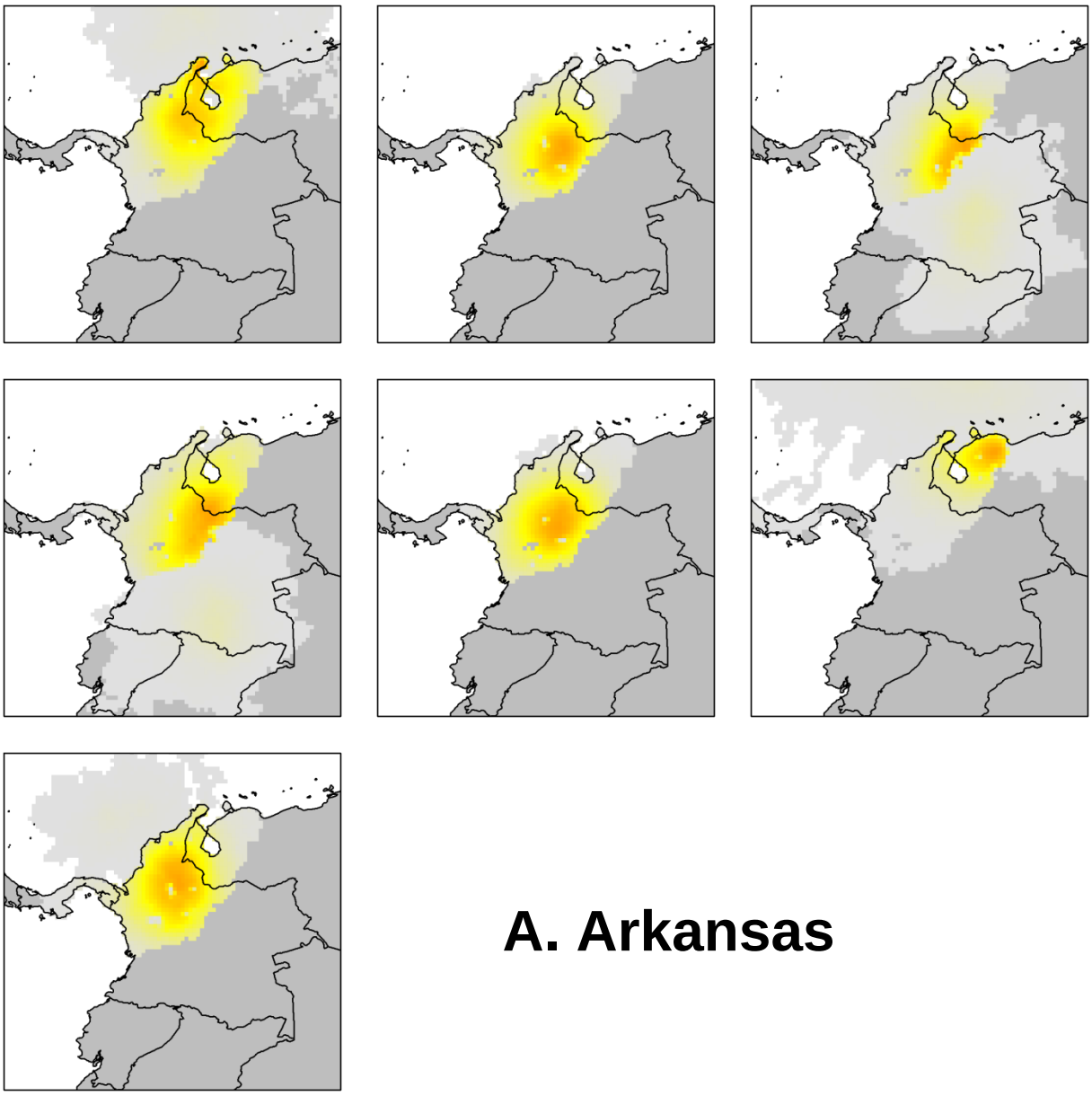
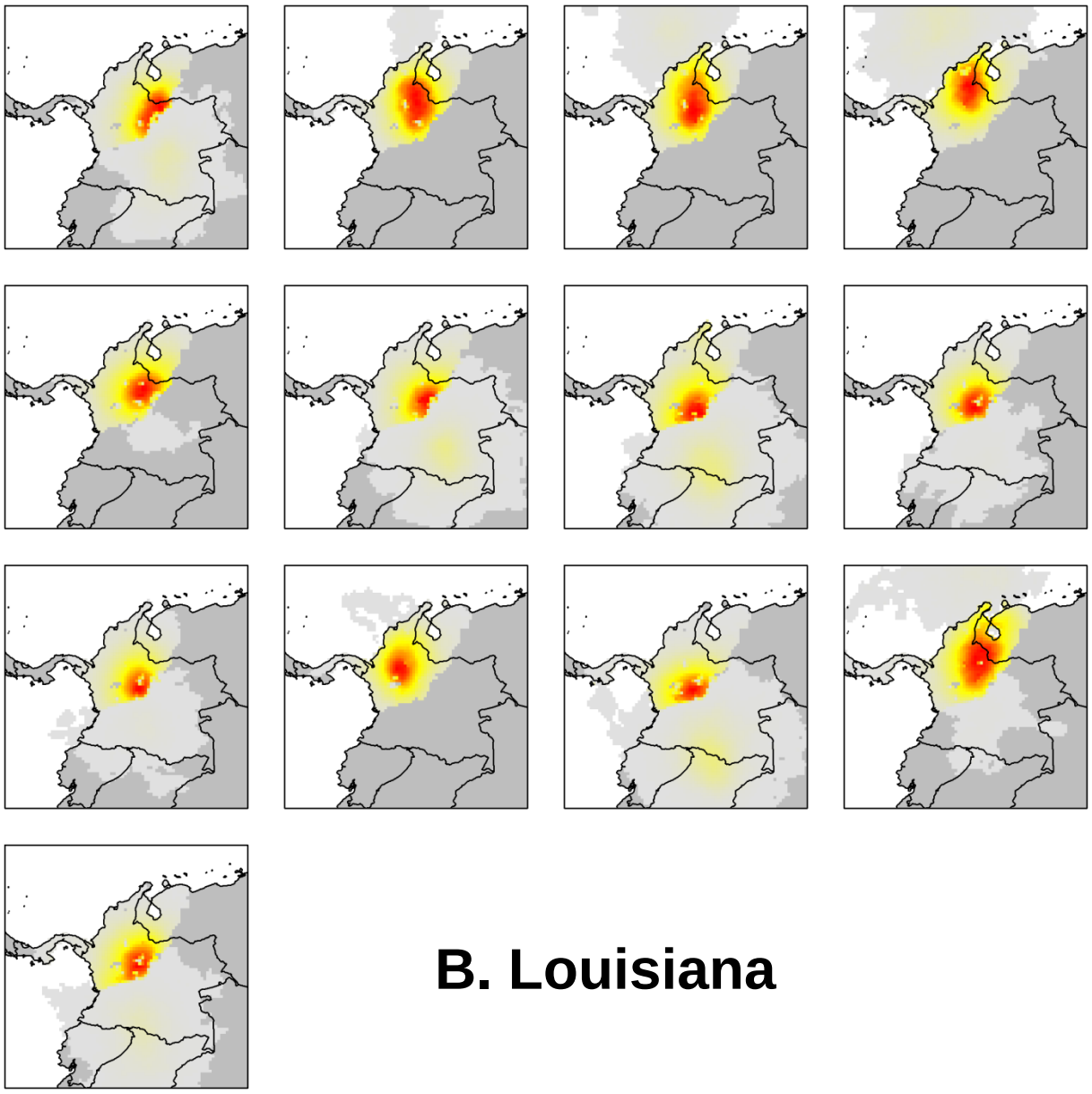



**FIGURE S2.** The nonbreeding location of individual Prothonotary Warblers estimated from light-level geolocators deployed during the breeding season in (**A**) Arkansas (*n* = 7), (**B**) Louisiana (*n* = 13), (**C**) Ohio (*n* = 3), (**D**) South Carolina (*n* = 3), (**E**) Virginia (*n* = 4), and (**F**) Wisconsin (*n* = 3). The color ramp (different for each breeding site) represents increasing probability of the nonbreeding location for each individual.

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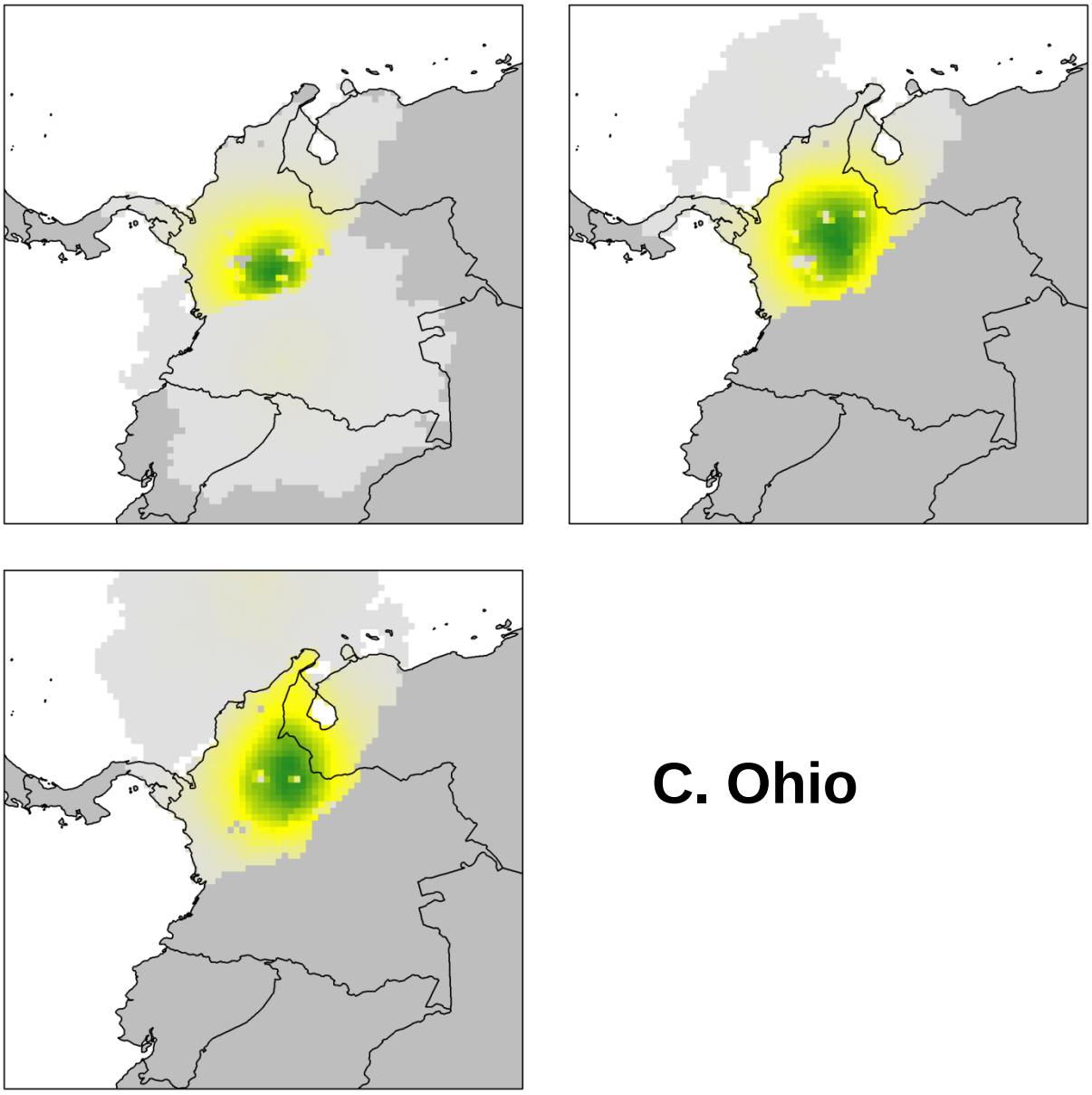


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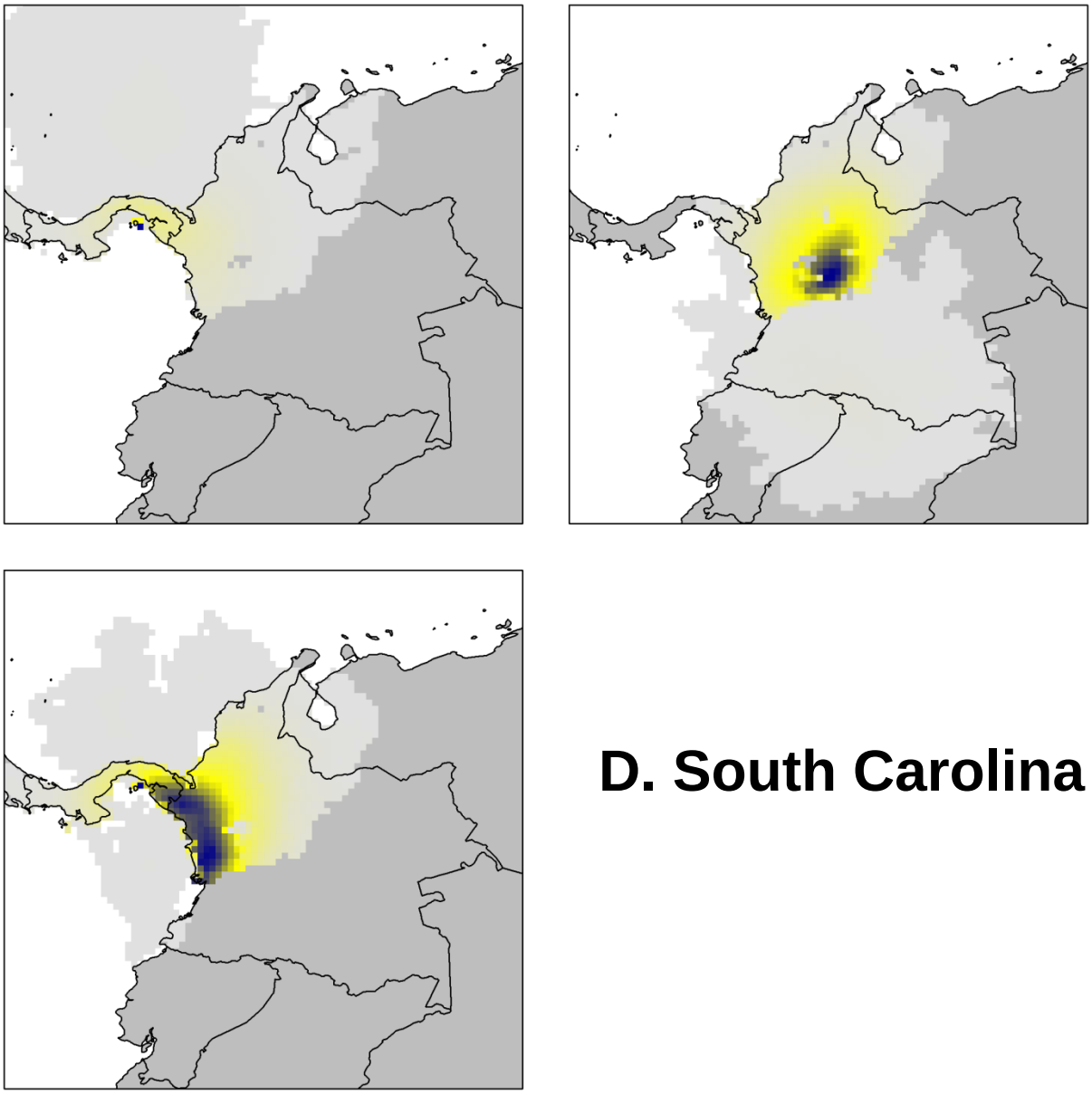


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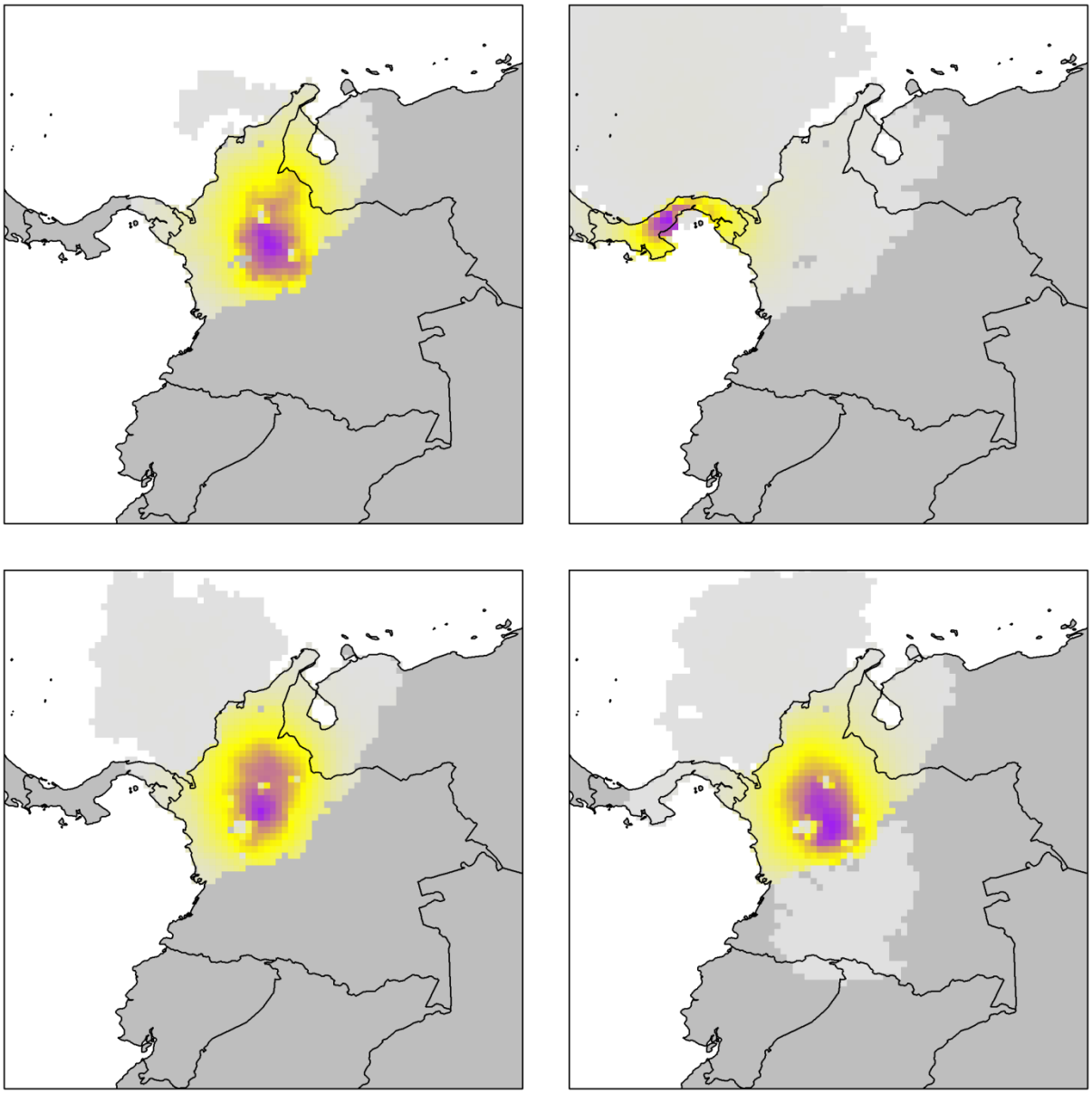

# E. Virginia

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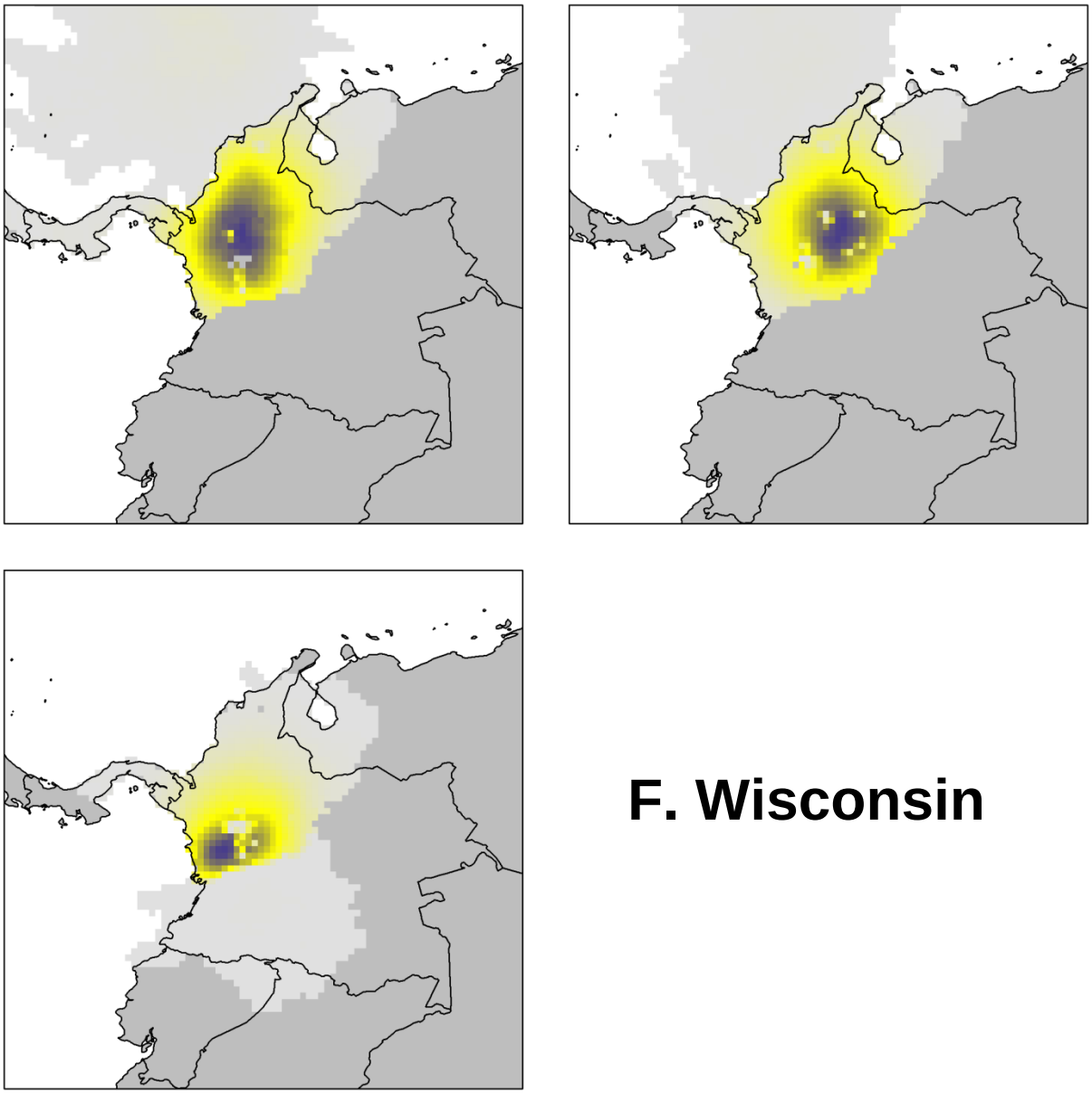


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